



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,832	12/18/2006	Karim S. Karim	069566-0400	2104
22428 7590 10/28/2008 FOLEY AND LARDNER LLP SUITE 500 3000 K STREET NW WASHINGTON, DC 20007				
EXAMINER				
GAWORECKI, MARK R				
ART UNIT		PAPER NUMBER		
2884				
MAIL DATE		DELIVERY MODE		
10/28/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/567,832

Applicant(s)

KARIM, KARIM S.

Examiner

MARK R. GAWORECKI

Art Unit

2884

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 20, 21 and 26 is/are allowed.
- 6) ☒ Claim(s) 1-6, 8, 11, 13-19 and 22-25 is/are rejected.
- 7) ☒ Claim(s) 7, 9, 10 and 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
- Paper No(s)/Mail Date 2/10/06, 8/25/2006, 10/18/2007
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed 10 February 2006 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered unless cited by the examiner.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 22-24 are rejected under 35 U.S.C. 101 because the claims are directed to neither a "process" nor a "machine," but rather embrace or overlap two different statutory classes of invention set forth in 35 U.S.C. 101 which is drafted so as to set forth the statutory classes of invention in the alternative only. *Id.* at 1551.

Claims 22-24 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 22-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. **Note:** A single claim which claims both an apparatus and the process of using the apparatus is indefinite under 35 U.S.C. 112, second paragraph. Ex parte Lyell, 17 USPQ2d 1548 (Bd. Pat. App. & Inter. 1990).
6. Claims 22-24 provide for the use of a digital imaging apparatus, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim Objections

7. Claims 17-19, 23, and 24 are objected to because of the following informalities:
- Claims 17-19 include the phrase "...according to 16..."
- Claim 23 includes the phrase "...according to claims 22..."
- Claim 24 includes the phrase "...according to claims 23..."
8. Appropriate correction is required.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1-4, 6, 8, 13-15, 22, and 25 rejected under 35 U.S.C. 102(b) as being anticipated by Karim *et al.* (WO 02/067337 A2).

With respect to claims 1-3, 14, 15, and 25, Karim discloses a digital imaging apparatus comprising a detector for generating a first signal in response to photons incident thereupon (sensor, Fig. 5); and multimode readout circuitry coupled to said detector for receiving said first signal and for generating a second signal representative of said first signal (reset, integration, readout), said multimode circuitry switchable between two or more modes of operation (Pg. 2, lines 23-33), a desired mode of operation based on characteristics of said first signal (magnitude, amplifies signal is below a threshold, Pg. 13). With further respect to claim 25, detectors of this type inherently output to electronics for processing (see Karim, discussion of prior art, pg. 1, lines 10-28).

With respect to claim 22/1, Karim teaches the sensor to be used in medical imaging systems (Pg. 1, lines 10-28).

With respect to claim 4, Karim teaches using different modes to output different signals, thus the device is capable of generating two or more signals representative of a first signal (see above).

With respect to claims 6 and 8, Karim teaches the circuit to progress through each mode in a pre-programmed sequence (Pg. 12, lines 8-28).

With respect to claim 13, Karim teaches the use of TFTs (Pg. 12, lines 8-28), and discusses a-Si TFTs in particular (Pg. 20, lines 8-29).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Karim.

With respect to claim 5, in view of claims 6 and 8 above, it would have been obvious to one of ordinary skill in the art at the time the invention was made that manually applying appropriate signals for the purposes of testing would be sufficient to manually switch the device between successive modes in the predetermined sequence.

13. Claims 11 and 16-19 rejected under 35 U.S.C. 103(a) as being unpatentable over Karim, in view of Wyles *et al.* (5,083,016).

With respect to claims 11 and 16-19, Karim does not show the claimed common portion of a multimode readout circuitry configuration and/or the claimed multiplexers thereof. However, using multiplexers to share circuitry is well known and conventional and would have been obvious at the time the invention was made. Wyles is cited merely as an example of a known multiplexer configuration. Wyles teaches a plurality of digital imaging apparatuses (multiple pixels, Fig. 3) having a common portion of readout circuitry (each pixel with associated readout cell shares a common column multiplexer circuitry and output stage). Further, this "common portion" would have been understood by one of ordinary skill in the

art to include multiplexer circuitry which would conventionally include multiplexers or switching circuits.

Allowable Subject Matter

14. Claims 20, 21 and 26 are allowed.
15. Claims 7, 9, 10, and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

With respect to claim 7, the prior art of record, as applied above, does not teach a multimode readout circuit which is switchable between multiple modes of operation by use of an automatic switch which includes a feedback circuit.

With respect to claims 9 and 10, the prior art of record, as applied above, does not teach a reconfigurable circuit defining particular modes of operation.

With respect to claim 12, the prior art of record, as applied above, does not teach the use of two or more capacitors having varying capacitance values, wherein the capacitors are arranged in parallel and configured to be switched, thereby providing two or more gains.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARK R. GAWORECKI whose telephone number is (571)272-8540. The examiner can normally be reached on Tuesday through Friday, 6:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. R. G./
Examiner, Art Unit 2884
22 October 2008
/David P. Porta/
Supervisory Patent Examiner, Art Unit 2884